Freddie Mac

Economic & Housing Research **Outlook**

APRIL 2017

Where Have All the Houses Gone?

Tight housing inventory has been an important feature of the housing market at least since 2016. For-sale housing inventory, especially of starter homes, is currently at its lowest level in over ten years. If inventory continues to remain tight, home sales will likely decline from their 2016 levels. As we enter the spring home buying season, all eyes are on housing inventory and whether or not it will meet the high demand.

Recent Trends in Economic, Housing & Mortgage Markets

With the second quarter of 2017 underway, recent economic events have been relatively in line with our predictions. Low unemployment and increasing inflation are still ongoing trends. The labor market is continuing to strengthen, as the unemployment rate dropped to 4.5 percent in March—the lowest rate in nearly a decade.

Additionally, inflation has gradually been ticking up since the start of the year. The Consumer Price Index (CPI) increased 0.1 percent in February and was at 2.7 percent year over year. Core-CPI (exclusive of food and energy components) increased 2.2 percent year over year.

Consumer prices aren't all that have been rising. The S&P CoreLogic Case-Shiller U.S. National Home Price SA Index reported a 0.6 percent month-over-month increase in January, marking a 5.8 percent rate of appreciation since January of last year. While full employment and rising inflation are signs of a strong economy, they also have the potential to push mortgage rates and house prices up. The higher rates and higher prices create significant affordability concerns, which may continue to characterize the housing market for the rest of 2017.

Forecast Snapshot (April 2017)

Summary (annualized)	2016	2017	2018
30-year PMMS (%)	3.7	4.4	4.8
Total home sales (M)	6.01	5.90	6.02
House price growth (%)	6.5	5.2	4.1
Total originations ($B)	2,125	1,545	1,500

Inventory is tight.

Housing inventory has been at its lowest level in over a decade. Between December 2016 and February 2017, the number of months of supply of existing homes averaged 3.6, the lowest level since 2000. A number of other housing market metrics also point to low for-sale housing inventory.

Exhibit 1

Housing Market Metrics to show the low supply of houses

Metric	Current Level (Feb 2017)	Historical Average (1985-2015)
Housing Starts (million)	1.28	1.36
Number of months of supply – existing single-family homes (months)	3.8	6.7
Time on market (months)	3.0	5.3
Homes available for sale: existing + new single-family homes ('000)	1801	2527

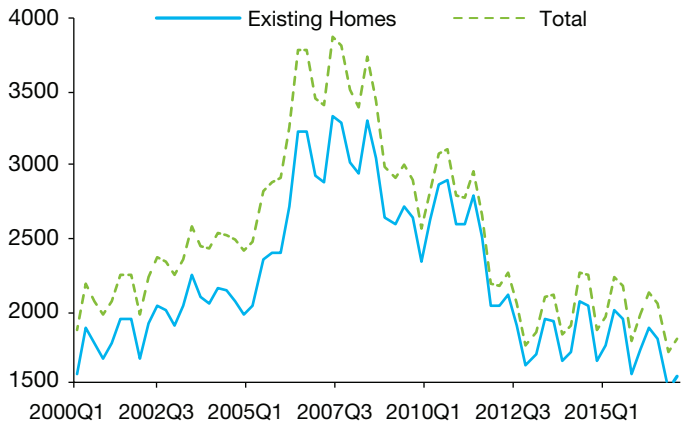
Source: National Association of Realtors; U.S. Census Bureau; Realtor.com

Housing starts were 1.17 million for 2016 and are projected to be 1.26 million for 2017, well below the historical average of 1.36 million and the approximately 1.7 million additional housing units the U.S. economy needs to add to replace existing stock, meet new household formation and second home demand. The average length of time a house stays on the market is 3 months, quite low compared to the historical average of 5.3 months. The low average number of months a home is available for sale is not necessarily a cause of concern if it is due to an efficient market. However, coupled with the low number of homes currently available for sale, it is concerning. The number of homes available for sale has gone down significantly compared to pre-crisis years. This is true both for existing and new homes available for sale, which are at almost half the level they were at in 2007.

Exhibit 2

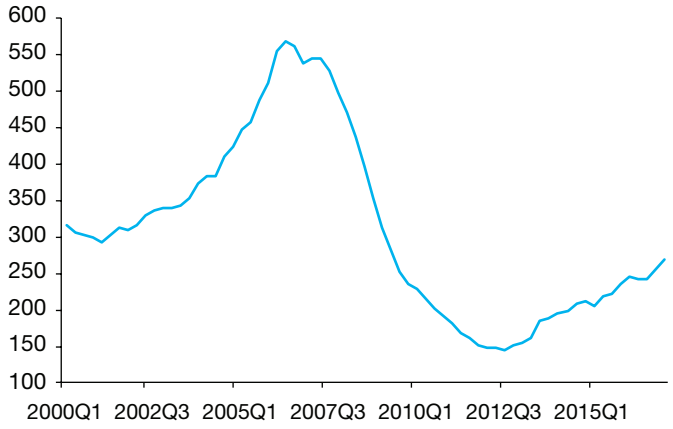
Homes available for sale ('000)

Existing and Total Homes for Sale



Source: National Association of Realtors; U.S. Census Bureau

New Homes



Source: U.S. Census Bureau

The reasons for the lower inventory are: many homeowners are not selling their homes for fear of not being able to find homes they like within their budget; and some borrowers do not want to let go of the extremely low mortgage rates that they locked in for their homes bought after the crisis— if they move, they might not be able to get their new loans at such low rates. Home prices have still not recovered to their pre-crisis levels for many homeowners and selling their homes would fetch them less than the amounts they owe on their mortgage. Due to these factors, homeowners are staying in their homes for more years than was the case prior to the crisis.

The Case of Mr. and Mrs. Smith

Consider Mr. and Mrs. Smith, who live in a rented apartment in the Denver metro area. They are a middle-class family earning an income of $64,000 in 2013. They decided to buy a townhome for their expanding family in the spring of 2013. The Smiths purchased a townhome at the median sales price of $177,000 in Denver during April 2013. After putting 10 percent down, they got a 30-year conventional mortgage at 3.4%. Since they did not make a 20 percent down payment, they need to pay private mortgage insurance (PMI) on their loan. Their monthly mortgage payment (principal, interest and PMI) is $774, which includes a PMI payment of $68 per month.[1]

1 PMI calculations based on an insurance rate of 0.51%. The PMI payments would get cancelled once they reach 20% equity on their home. http://www.freddiemac.com/blog/homeownership/20170126_downpayment_math_challenge.html.

The Smiths family expanded further and they now have a toddler and an infant at home. They feel the townhome is getting too small for their family. The Smiths plan to upgrade to a bigger home. They initially considered making the upgrade in February 2016, but realized that they would have to pay 1.5 times their monthly payment ($1,298) to afford a median-priced single-family home in Denver. They felt this would have put a lot of burden on their finances and decided to hold off on making the leap. One year later, they reconsider moving to a bigger home and realize that they would have to shell out even more on their monthly payments to make the move. If they buy a median priced home in the same metro area, their monthly payment would almost double to $1,515, assuming they have enough equity on their current home to put 20 percent down. They regret not making the move last year when the interest rates and home prices were lower. And they know rates and home prices could rise further this year. While the Smiths might be able to afford the additional $217 [$1515 - $1298 = $217] per month above the year-ago cost for a larger home, other families may find it difficult to pay additional money for an upgrade. Whether to make the move or not is the dilemma most of the homeowners wishing to upgrade their homes are facing, not only in Denver but across the entire country.

Now, imagine the Johnson family is moving to Denver in spring of 2017 and they are hoping to buy their first home. Their family is small and their income modest, so they are hoping to buy a townhome. The Smith's home would be perfect for them. If the Smiths trade up, the Johnsons could buy their townhome. If the Smiths stay put, the Johnsons will have to rent.

Exhibit 3

Illustrative Example[1]

Metric	Townhome			Single Family Home		
	13-Apr	16-Feb	17-Feb	13-Apr	16-Feb	17-Feb
Mortgage Rate (%)	3.4	3.6	4.16	3.4	3.6	4.16
Median Home Price ('000)	177	260	280	279	357	389
Down Payment (%)	10	10	10	20	20	20
Loan Amount ('000)	159	234	252	223	286	311
PMI Payment (%)	68	99	107			
P+I (%)	706	1064	1226	990	1298	1515
Total Payment ($)[2]	774	1163	1334	990	1298	1515

1 Based on data from Redfin home prices, sales and inventory database.
2 Does not include property tax and homeowner's insurance payments.

Conclusion

Even though Denver is a strong housing market, it is not unique. The housing market conditions, especially in terms of the tight for-sale housing inventory, have been similar in most of the areas across the country.

The decision the Smiths, and millions of other homeowners like them, make will impact housing inventory. Their decisions will impact home sales for the year, which we project will decrease to 5.90 million in 2017. The spring home buying season is key to understanding how the housing market performs over the year; to see if those willing to list their home (aka the Smiths) actually do so and those looking to buy (aka the Johnsons) get lucky and find their dream home. The mortgage rates, which are an important factor in home buying, would also come into play. If inflation reaches its target rate and labor markets tighten further, mortgage rates will rise as projected. This will make it difficult for some homebuyers, who might not be able to afford the higher mortgage payments and therefore might be sidelined. If that happens, then we may not be able to match the home sales seen in 2016, which was housing's best year in a decade.

April 2017 Economic & Housing Market Forecast

Forecasted Figures

Historical Data

As of 4/3/2017

Indicator	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	Annual Totals 2016	Annual Totals 2017	Annual Totals 2018
Real GDP (%)	0.8	1.4	3.5	2.1	1.9	2.3	2.3	2.2	2.0	2.2	2.2
Consumer Prices (%) a.	0.1	2.3	1.8	3.0	2.4	2.3	2.1	2.2	1.8	2.2	2.4
Unemployment Rate (%) b.	4.9	4.9	4.9	4.7	4.8	4.8	4.7	4.7	4.9	4.8	4.5
30-Year Fixed Mtg. Rate (%) b.	3.7	3.6	3.5	3.8	4.2	4.4	4.5	4.5	3.7	4.4	4.8
5/1 Hybrid Treas. Indexed ARM Rate (%) b.	2.9	2.8	2.8	3.0	3.2	3.5	3.6	3.8	2.9	3.5	4.1
10-Year Const. Mat. Treas. Rate (%) b.	1.9	1.8	1.6	2.1	2.4	2.6	2.7	2.7	1.9	2.6	3.0
1-Year Const. Mat. Treas. Rate (%) b.	0.6	0.6	0.6	0.8	0.9	1.1	1.4	1.6	0.7	1.3	2.0
Housing Starts c.	1.15	1.16	1.14	1.25	1.25	1.25	1.27	1.30	1.17	1.27	1.36
Total Home Sales d.	5.89	6.04	5.96	6.11	6.10	5.90	5.80	5.80	6.01	5.90	6.02
FMHPI House Price Appreciation (%) e.	1.6	1.4	1.5	1.8	1.4	1.2	1.2	1.2	6.5	5.2	4.1
1-4 Family Mortgage Originations f.											
- Conventional	$295	$432	$466	$458	$238	$341	$341	$251	$1,651	$1,171	$1,174
- FHA & VA	$95	$113	$134	$132	$97	$102	$91	$84	$474	$374	$326
- Total	$390	$545	$600	$590	$335	$443	$432	$335	$2,125	$1,545	$1,500
Refinancing Share - Originations (%) g.	51	44	47	50	39	27	24	21	48	27	20
Residential Mortgage Debt (%) h.	1.3	3.1	4.4	3.4	3.8	4.0	4.2	4.3	3.1	4.1	4.7

Note: Quarterly and annual forecasts are shown in shaded areas; totals may not add due to rounding; quarterly data expressed as annual rates.
Annual forecast data are averages of quarterly values; annual historical data are reported as Q4 over Q4.

a. Calculations based on quarterly average of monthly index levels; index levels based on the seasonally-adjusted, all-urban consumer price index.

b. Quarterly average of monthly unemployment rates (seasonally-adjusted); Quarterly average of monthly interest rates (not seasonally-adjusted).

c. Millions of housing units; quarterly averages of monthly, seasonally-adjusted levels (reported at an annual rate).

d. Millions of housing units; total sales are the sum of new and existing single-family homes; quarterly averages of monthly, seasonally-adjusted levels (reported at an annual rate).

e. Quarterly growth rate of Freddie Mac's House Price Index; seasonally-adjusted; annual rates for yearly data.

f. Billions of dollars (not seasonally-adjusted).

g. Home Mortgage Disclosure Act for all single-family mortgages (not seasonally-adjusted); annual share is dollar-weighted average of quarterly shares (2014 estimated).

h. Federal Reserve Board; growth rate of residential mortgage debt, the sum of single-family and multifamily mortgages (not seasonally-adjusted, annual rate).

Prepared by Office of the Economic & Housing Research group; Send comments and questions to chief_economist@freddiemac.com.

Prepared by the Economic & Housing Research group

www.freddiemac.com/finance